

IN THE CLAIMS:

Claims 1-120 (Currently Cancelled)

121. (Original) An apparatus for evaluation of heart failure in a patient comprising:  
a means for supplying a controllable level of breathable gas to a patient at a pressure above atmospheric;  
a flow sensor to generate a flow signal indicative of the patient's airflow; and  
a controller to process said flow signal and control said means for supplying wherein said controller is adapted and configured for:  
delivering breathable gas at a pressure above atmospheric to a patient with said means for supplying; and  
calculating a heart failure indicator from said flow signal, said heart failure indicator representing information about the patient's condition.

122. (Original) The apparatus of claim 121 wherein said calculating includes analyzing said airflow to determine an extent of Cheyne-Stokes breathing of the subject.

123. (Original) The apparatus of claim 122 wherein the controller is further configured and adapted for prompting for heart failure monitoring characteristics and recording said heart failure monitoring characteristics and said heart failure indicator in a memory.

124. (Original) The apparatus of claim 123 wherein one of said heart failure monitoring characteristics is a level of B natriuretic peptide.

125. (Original) The apparatus of claim 122 wherein the controller is further configured and adapted for controlling a step of identifying subsequent heart failure treatment based at least in part upon said heart failure indicator.

126. (Original) The apparatus of claim 125 wherein said subsequent heart failure treatment is an increase in the pressure of the breathable gas.

127. (Original) The apparatus of claim 122 wherein the controller is further configured and adapted for controlling comparing said heart failure indicator to a prior heart failure indicator determined during a previous treatment session.

128. (Original) The apparatus of claim 122 wherein the controller is further configured and adapted for reducing said pressure during a detected episode of Cheyne-Stokes breathing for a predetermined period of time to permit a determination of said heart failure indicator from said predetermined period of time such that a pattern of Cheyne-Stokes breathing can emerge without significant influence from treatment pressure.

129. (Original) The apparatus of claim 122 wherein said calculating comprises analyzing said airflow to determine a duration of a waxing and waning cycle.

130. (Original) The apparatus of claim 125 wherein said controller is further configured and adapted for analyzing said heart failure indicator as a function of a threshold value.

131. (Original) The apparatus of claim 125 wherein said indicator is a function of a measure of ventilation.

132. (Original) The apparatus of claim 125 wherein said controller is further configured and adapted for analyzing said heart failure indicator to determine a change in said heart failure indicator over time.

133. (Currently Amended) The apparatus of claim ~~[[128]]~~ 132 wherein said change is a difference between a previous heart failure indicator and a subsequent heart failure indicator.

134. (Original) The apparatus of claim 128 wherein said change is a ratio of a previous heart failure indicator and a subsequent heart failure indicator.

135. (Original) The apparatus of claim 128 wherein said controller is further configured and adapted for generating a warning signal as a function of said change from said step of analyzing.

136. (Original) The apparatus of claim 135 wherein said warning signal triggers an audible alarm in said device.

137. (Original) The apparatus of claim 122 wherein said calculating comprises a frequency analysis of said airflow in a range of frequencies indicative of Cheyne-Stokes breathing cycle.

138. (Original) The apparatus of claim 137 wherein said frequency analysis of said airflow is in a range of about 1/20 hertz to 1/90 hertz.

139. (Original) The apparatus of claim 138 wherein said heart failure indicator includes a magnitude of a component of said airflow at a frequency in said range.
140. (Original) The apparatus of claim 139 wherein said heart failure indicator is a sum of magnitudes of components of said airflow in a sub-range of frequencies in said range.
141. (Original) The apparatus of claim 140 wherein said frequency analysis of said airflow is performed with data sampled from a measure of ventilation derived from said airflow.
142. (Original) The apparatus of claim 141 wherein said measure of ventilation is a minute volume.
143. (Original) The apparatus of claim 139 with further instructions for controlling a step of comparing said magnitude with a threshold value.
144. (Original) The apparatus of claim 143 wherein said threshold value is a magnitude derived from a previous frequency analysis.
145. (Original) The apparatus of claim 122 wherein said indicator is a measure of ventilation.
146. (Original) The apparatus of claim 145 wherein said measure of ventilation is a threshold of about 15 L/min.

147. (Original) The apparatus of claim 122 wherein said indicator is a ratio of a minimum ventilation and a maximum ventilation.

148. (Original) The apparatus of claim 147 wherein the minimum ventilation and maximum ventilation are derived from a measure of minute ventilation.

149. (Original) The apparatus of claim 147 wherein the minimum ventilation and maximum ventilation are derived from a measure of tidal volume.

150 – 178 (Currently Cancelled)